Patient Characteristics Associated with Knowledge about Prostate Cancer Screening and Screening Status

Introduction

While there is controversy over whether prostate cancer screening saves lives, the screening rates for men in the United States has been increasing in the last 10 years.[1] Screening with the prostate-specific antigen (PSA) test has become increasingly common during this time; the research reviewed in this report refers to screening with the PSA test. In this review we will first discuss the association of screening status with knowledge about prostate cancer screening. In other words, are men who have been screened for prostate cancer more knowledgeable about prostate cancer screening and the risks and benefits of screening? We will then review the demographic characteristics that are associated with whether or not men are screened for prostate cancer.

Knowledge and Prostate Cancer Screening Status

The association of knowledge about prostate cancer screening with getting prostate cancer screening is not clear due to the inconsistency in the literature. One study showed that men who chose not to get screened had less knowledge about prostate cancer and a less positive attitude toward screening than men who chose to get screened.[2] This finding suggests that giving men information about prostate cancer screening would increase screening rates. In other studies, informational interventions actually decreased the interest in prostate screening after the benefits and burdens associated with prostate screening were explained to the participants. [3,4]

Receiving prostate cancer screening is not necessarily associated with increased knowledge about prostate cancer screening. One study showed that men who were screened were more likely to know prostate cancer risk factors and the advantages to being screened than unscreened men, but not more likely to know the risks of screening.[5] This finding suggests that some men are getting screened without making an informed decision. We were only able to find a few studies about knowledge of prostate cancer screening and screening status. Most of the literature focuses on demographic characteristics (such as socioeconomic status) and how they are associated with prostate cancer screening.

Demographic Characteristics Associated with Prostate Cancer Screening

Race – In our analyses of the Washington Behavioral Risk Factor Surveillance System (BRFSS) data from 2001-2002, 52% of White men over the age of 50 had a PSA test in the past year.[6] Unfortunately, the numbers of men over age 50 in other racial and ethnic groups were too small to get reliable estimates of their screening rates. According to the Medical Expenditure Panel Survey (MEPS) the percentage of men aged 50-64 who received a PSA test in the past year was about 48% for White men, 43% for Black, non-Hispanic men and 36% for Hispanic or Latino men. [7] African American and African-Caribbean men have been determined to have some of the highest rates of prostate cancer in the world.[8,9] Much study has been put into understanding why this is and how to increase awareness of prostate cancer screening in these groups.

Marital Status— Married/partnered men had higher screening rates than single men in our WA BRFSS sample (widowed men had the highest screening rates, probably because they tend to be older).[6] A study by Nijis and colleagues supports our finding that married men have higher screening rates than unmarried men.[2] Marital status seems to have a different type of association with knowledge about prostate cancer screening. In a study where an informational intervention was used to increase knowledge about prostate cancer screening, the authors found that there was actually a decreasing interest in prostate screening by the married men.[3] In a different study that was measuring the knowledge of the limitations of prostate cancer screening, the researchers found that married men had lower knowledge scores than their unmarried counterparts.[10]

Age— In Washington, men are more likely to have been screened with PSA in the past year if they are over 65 years old.[6] Similarly, the MEPS screening rates for men over age 65 was higher than those for age 50-64 with the total percentages being 66 and 46 respectively.[7] Clinical guidelines provided by organizations like the American Cancer Society generally recommend that prostate cancer screening should not occur for patients with life expectancies under 10 years.[3] Despite this fact it seems that elderly men (men over the age of 70) are still more likely to undergo PSA testing than younger men.[3]

Socioeconomic Status—Men surveyed in the WA BRFSS had higher prostate cancer screening rates if their total household income was more than $20,000 per year.[6] Higher incomes are associated with more frequent screening.[9] Low income and lower education levels are associated with lower general knowledge of prostate cancer.[2, 10] Those with less than a high school education are less likely to be screened.[11] There also seems to be an association between low education and low knowledge of prostate cancer screening.[2]

Literacy—Low literacy (defined as less than a sixth grade reading level) has been linked to late diagnosis of prostate cancer. Men with a low literacy rate seem to be at a more advanced stage of prostate cancer when diagnosed, suggesting that low literacy may be a barrier to prostate cancer screening.[12] This study also found that black men were more likely to have low literacy skills than White men; proportion of Black men with less than sixth grade literacy level was 52.3% while the same literacy levels were seen in only 8.7% of the White men. Other research has found that people over the age of 50 often have lower literacy skills than younger people.[13] Literacy level should be considered when planning and creating prostate cancer screening education materials for men in this age group.

Other Characteristics

Perception of health status— Having a good self-perceived health status has been seen to be associated with a decreased interest in screening in one study, while in another study those who refused to be screened had a lower general health perception than those that attended the prostate cancer screening.[2,3]

Health Coverage & Access to Health Services— Lack of access to health care and health care costs are a huge deterrent to screening and seeking medical advice about prostate cancer screening. Uninsured men in the WA BRFSS sample had very low prostate cancer screening rates compared with insured men.[6] In one study of rural Mexican Americans, the participants

said that one of the biggest barriers to accessing a health care provider for screening or information was their lack of health insurance.[14]

There needs to be a supportive relationship between the health professional and the patient concerning prostate cancer screening for informed decisions concerning screening to occur.[15] However, this trusting relationship can only occur if the patient has a regular and consistent doctor. But in the present health care system it is common to change health care plans and physicians quite regularly.[16] Male participants in the WA BRFSS without a regular doctor had low prostate cancer screening rates compared with men who have a regular doctor.[6] Having access to a regular doctor and having a positive experience with the accessible health care providers can greatly affect the knowledge level and screening rates for prostate cancer.[2] It is possible for a negative doctor-patient interaction to decrease a patient's interest in being screened. If the patient has a negative experience with a health professional he is less likely to want to return to that doctor for screening or for health materials regarding prostate cancer.[17]

Other characteristics that are positively associated with receiving prostate cancer screening are having a family history of cancer, men having urological complaints, and believing that prostate screening is effective.[2, 9, 18, 19]

Conclusion

The prostate cancer screening literature shows that there are many characteristics that are associated with a man's knowledge about prostate cancer screening as well as his likelihood of being screened. These include demographic characteristics such as race, socioeconomic factors, age, and marital status as well as other characteristics such as perceptions of health status, health insurance, and access to health care. Increased knowledge will increase the proportion of men who know the disadvantages and advantages of screening and increase the proportion of men make informed decisions about prostate cancer screening. Knowing the characteristics associated with knowledge and screening status will help us tailor informed decision making intervention programs to the specific needs of the communities in Washington.

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